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EXAMINER

AUGHENBAUGH, WALTER

ART UNIT PAPER NUMBER

1772

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/661,848

Applicant(s)

MOEHLENBROCK ET AL.

Examiner

Walter B. Aughenbaugh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 18-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/12/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-17 in the reply filed on June 24, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 recites the limitation "said unfilled oxygen impermeable polymer composition" in the first through second lines of the claim. There is insufficient antecedent basis for this limitation in the claim: claim 10 does not recite the term "unfilled". Furthermore, the structure intended to be recited by the term "unfilled" in claim 11 cannot be ascertained.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 1-9 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forte in view of Antoon, Jr.

In regard to claims 1 and 14, Forte teaches a water vapor permeable multilayer film (col. 1, lines 9-12 and col. 3, lines 24-28 and 39-47) comprising a first outer layer (one of the C layers), a second outer layer (the other C layer) and an intermediate microporous layer (the B layer) disposed between the first and second outer layers (col. 3, lines 24-47). The first and second outer layers are independently formed from heat sealable compositions because thermoplastic materials fall within the scope of the teaching of Forte of suitable materials for the first and second outer layers at col. 6, lines 46-47, 55-57 and 60-67 and because the first and second outer layers are formed by heating the unmelted solid of the suitable material, extruding the heated material and cooling the extrudate to form the final product (col. 10, line 18-col. 11, line 44) (the suitable materials for the first and second outer layers are heat sealable because the materials are heated, extruded and cooled to form the multilayer film, thus sealing the intermediate microporous layer).

Forte fail to explicitly teach that the intermediate microporous layer is formed from an oxygen impermeable composition.

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Antoon, Jr., however, disclose a container comprising a film that is substantially impermeable to oxygen and highly permeable to water vapor (col. 1, line 64-col. 2, line 7 and col. 2, lines 21-26 and 31-37). Antoon, Jr. disclose that silicone-coated microporous films are suitable films for the film that is substantially impermeable to oxygen and highly permeable to water vapor (col. 3, lines 14-17). Therefore, one of ordinary skill in the art would have recognized to have used a silicone-coated microporous film as the intermediate microporous layer of Forte since silicone-coated microporous film is well known to be a water vapor permeable microporous film as taught by Antoon, Jr.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a silicone-coated microporous film as the intermediate microporous layer of Forte since silicone-coated microporous film is well known to be a water vapor permeable microporous film as taught by Antoon, Jr.

In further regard to claim 14, while Forte teach that an application for the film is food packaging (col. 1, lines 34-37), Forte fail to explicitly teach a package comprising the multilayer film as discussed above that comprises an oxygen sensitive product.

Antoon, Jr., however, disclose a package comprising an oxygen sensitive product (col. 1, lines 64-67) comprising a film that is substantially impermeable to oxygen and highly permeable to water vapor (col. 2, lines 21-26 and 31-37). Therefore, one of ordinary skill in the art would have recognized to have formed a package out of the film taught by Forte and Antoon, Jr. as discussed above, and to have stored an oxygen sensitive product in the package as taught by Antoon, Jr. since it is well known to form packages from a film that is substantially impermeable

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to oxygen and highly permeable to water vapor to store and protect an oxygen sensitive product as taught by Antoon, Jr.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed a package out of the film taught by Forte and Antoon, Jr. as discussed above, and to have stored an oxygen sensitive product in the package as taught by Antoon, Jr. since it is well known to form packages from a film that is substantially impermeable to oxygen and highly permeable to water vapor to store and protect an oxygen sensitive product as taught by Antoon, Jr.

In regard to claim 2, Forte teach that polyesters and polyamides are suitable materials for the outer layers (col. 6, lines 45-47 and 55-56). While Forte and Antoon, Jr. fail to explicitly teach that the heat sealable composition exhibits an oxygen transmission rate that is higher than that of the oxygen impermeable composition by the claimed amount, Antoon, Jr. teach an oxygen permeable layer formed of polyester (PET or PBT) or polyamide (nylon) (col. 4, lines 1-4) where the oxygen permeability of the oxygen permeable layer is between 5,000 and 10,000,000 cc/100 in²-atm-day (col. 2, lines 37-40). Since Antoon, Jr. teaches that the oxygen permeability of the oxygen permeable layer is between 5,000 and 10,000,000 cc/100 in²-atm-day, it follows that the oxygen permeability of the oxygen impermeable layer is less than 5,000 cc/100 in²-atm-day. Therefore, one of ordinary skill in the art would have recognized to have used a film having an oxygen permeability that is at least 50 cc-mil/100 in²-atm-day higher than that of the oxygen impermeable layer of the film taught by Forte and Antoon, Jr. for use as the heat sealable layer of the film taught by Forte and Antoon, Jr. since it is well known to use films having an oxygen permeability of between 5,000 and 10,000,000 cc/100 in²-atm-day as a heat

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sealable layer formed of polyester or polyamide as taught by Antoon, Jr. Note that selection of a film having an oxygen permeability of 5,050 cc/100 in²-atm-day or greater guarantees that the film has an oxygen permeability of at least 50 cc-mil/100 in²-atm-day higher than that of an oxygen impermeable layer as taught by Antoon, Jr.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a film having an oxygen permeability that is at least 50 cc-mil/100 in²-atm-day higher than that of the oxygen impermeable layer of the film taught by Forte and Antoon, Jr. for use as the heat sealable layer of the film taught by Forte and Antoon, Jr. since it is well known to use films having an oxygen permeability of between 5,000 and 10,000,000 cc/100 in²-atm-day as a heat sealable layer formed of polyester or polyamide as taught by Antoon, Jr.

In regard to claims 3 and 4, in the instance where the heat sealable composition is polypropylene as taught by Forte at col. 5, lines 19-24 and where the oxygen impermeable composition is cellophane as taught by Antoon, Jr. at col. 3, lines 14-17, the melting point of the oxygen impermeable composition is 10°C higher than that of the heat sealable composition as evidenced by US 5,358,785 to Akao et al. at col. 16, lines 32 and 41, and the modulus of the oxygen impermeable composition is about 70,000 psi higher than that of the heat sealable composition as evidenced by US 5,358,785 to Akao et al. at col. 16, lines 32 and 41 (90 kg force/mm² is about 130,000 psi and 140 kg force/mm² is about 200,000 psi).

In regard to claim 5, Forte teaches that the first four polymers claimed in claim 5, and polyesters, are suitable materials for the intermediate microporous layer (col. 5, lines 10, 19-20 and 23-27). Therefore, it would have been obvious to one of ordinary skill in the art at the time

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the invention was made to have used any of these materials taught by Forte as the material of the film of the silicone-coated microporous film of Antoon, Jr.

In regard to claim 6, Forte teaches that polypropylene/alpha-olefin copolymer is a suitable material for the intermediate microporous layer of Forte (col. 5, lines 10 and 23-27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the polypropylene/alpha-olefin copolymer taught by Forte as the material of the film of the silicone-coated microporous film of Antoon, Jr.

In regard to claims 7-9, Forte teaches that the heat sealable composition of the outer layers comprises linear low density polyethylene (a polyolefin, and an ethylene/alpha olefin copolymer, col. 7, lines 1-18).

In regard to claim 15, Antoon, Jr. teach that the film completely encloses the oxygen-sensitive product (col. 12, lines 52-54), so it would have been obvious to one of ordinary skill in the art at the time the invention was made to have completely enclosed the oxygen-sensitive product with the film taught by Forte and Antoon, Jr. since it is well known to completely enclose an oxygen-sensitive product with an oxygen impermeable film to store and protect the product as taught by Antoon, Jr.

In regard to claim 16, Antoon, Jr. teach that the oxygen-sensitive product is a fruit or a vegetable (col. 1, lines 64-68).

In regard to claim 17, Antoon, Jr. teach that the multilayer film is lidding stock (col. 5, lines 42-44).

6. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forte in view of Antoon, Jr.

Forte teaches a water vapor permeable multilayer film (col. 1, lines 9-12 and col. 3, lines 24-28 and 39-47) comprising a first outer layer (one of the C layers), a second outer layer (the other C layer), a center layer (the B layer), a first intermediate microporous layer (one of the A layers) disposed between the first outer layer and the center layer and a second intermediate microporous layer (the other A layer) disposed between the second outer layer and the center layer (col. 3, lines 24-47). The first and second outer layers each independently comprise a heat sealable composition because thermoplastic materials fall within the scope of the teaching of Forte of suitable materials for the center layer at col. 5, lines 10-27, and for the first and second outer layers at col. 6, lines 46-47, 55-57 and 60-67, and because the layers are formed by heating the unmelted solid of the suitable material, extruding the heated material and cooling the extrudate to form the final product (col. 10, line 18-col. 11, line 44) (the suitable materials for the layers are heat sealable because the materials are heated, extruded and cooled to form the multilayer film, thus sealing the intermediate microporous layers). Forte teach that the intermediate microporous layers must allow water vapor to pass through (col. 7, lines 40-42).

Forte fail to explicitly teach that the intermediate microporous layers each independently comprise an oxygen impermeable composition.

Antoon, Jr., however, disclose a container comprising a film that is substantially impermeable to oxygen and highly permeable to water vapor (col. 1, line 64-col. 2, line 7 and col. 2, lines 21-26 and 31-37). Antoon, Jr. disclose that silicone-coated microporous films are suitable films for the film that is substantially impermeable to oxygen and highly permeable to water vapor (col. 3, lines 14-17). Therefore, one of ordinary skill in the art would have recognized to have used a silicone-coated microporous film as the first and second intermediate

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microporous layers of Forte since silicone-coated microporous film is well known to be a water vapor permeable microporous film as taught by Antoon, Jr.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a silicone-coated microporous film as the first and second intermediate microporous layers of Forte since silicone-coated microporous film is well known to be a water vapor permeable microporous film as taught by Antoon, Jr.

In regard to claim 11, Forte teaches that propylene/alpha-olefin copolymer is a suitable material for the center layer (col. 5, lines 10 and 23-26). Forte also teaches that the intermediate microporous layers comprise a mixture of the polymers used in the center layer and the outer layers (col. 7, lines 52-56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the propylene/alpha-olefin copolymer taught by Forte in the material of the film of the silicone-coated microporous film of Antoon, Jr.

In regard to claims 12 and 13, Forte teaches that the heat sealable composition of the center layer comprises linear low density polyethylene (an ethylene/alpha olefin copolymer, col. 5, lines 19-27).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B. Aughenbaugh whose telephone number is 571-272-1488. The examiner can normally be reached on Monday-Thursday from 9:00am to 6:00pm and on alternate Fridays from 9:00am to 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Walter B. Aughenbaugh

09/19/05

WBA


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

9/19/05